

SAFETY WARNING TRANSMITTER.

(REV 12-11-00) (FA 6-20-01) (1-02)

ARTICLE 102-3 (Pages 106-111) is expanded by the following new Subarticle:

102-3.8 Safety Warning Transmitter:

102-3.8.1 General: This specification establishes the physical display and operational requirements for Safety Warning Transmitter units, which employs special microwave transmitters to generate messages in receivers that alert drivers to the presence of specific hazards and traffic conditions. These units may be attached to other devices when called for in the plans or requested by the Engineer. Safety Warning Transmitter units shall be Part 90 FCC accepted and shall meet all requirements specified herein.

The Safety Warning Transmitter shall be activated only during active work activities and will be deactivated when no work is being performed. The warning transmitter shall be activated and deactivated by a dial-up control system to allow operation of the sign from a remote location via cellular phone or standard telephone line. The warning transmitter shall be protected by a security code.

Manufacturers seeking approval for a Safety Warning Transmitter shall submit an application, Material Safety Data Sheet (MSDS) and certification in accordance with 6-1.

Only use Safety Warning Transmitters listed on the Qualified Products List.

Manufacturers providing the device described herein shall provide a certified test report to the Engineer indicating the device meets these specification requirements.

102-3.8.2 Output Frequency:

- (1) 24.1 GHz.
- (2) Maximum Output Power; 25 milliwatts per square meter at 3 meters.
- (3) Output Beam; 23 inch [.584 m] maximum vertical, 25 inch [.4 m] maximum horizontal beam width at 3dBC points, vertically polarized (if transmitter is horizontally mounted).
- (4) Input Power; + 11.0 to + 16.0 volts DC. Negative ground, maximum current 0.75 amperes, except initial surge maximum of 1.5 amperes.
- (5) Data Transmission; Either of two output messages selected depending upon speed of host vehicle relative to programmed threshold speed (stationary message and moving message). Capable of transmitting multiple advanced warning messages at least 2 miles.
- (6) Threshold Speed; 10 mph [16 km].
- (7) Field Programmability; Output messages may be programmed by PC or terminal using optional accessory cable.